

41319-94734

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of : Mannion, Liam
Serial No. : 10/650,227
Filed : August 28, 2003
For : Improved Load Balancing in a Network of
Call Centers
Examiner : Nguyen, My Xuan
Art Unit : 2617
Customer number : 23644

RESPONSE TO FINAL OFFICE ACTION MAILED MARCH 23, 2007.

Honorable Director of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the final Office Action mailed March 23, 2007, applicant makes the following submission:

In the Claims

Claims remain as follows:

1. (previously presented) A method of routing a contact in a network comprising a plurality of contact centers, said method comprising the steps of:-
 - a) receiving a contact at any one of the contact centers, said any one of the contact centers being designated a source contact center with respect to the received contact;
 - b) sending a reservation request from the source contact center to each of the contact centers including itself at the same time, said reservation request being for an agent with a specified relative intrinsic value;
 - c) for said reservation request, receiving at the source contact center from each of one or more of the contact centers, a value of the specified intrinsic and an associated agent identifier;
 - d) routing the received contact to one of the agents on the basis of the received intrinsic.
2. (original) A method as claimed in claim 1 wherein said specified intrinsic is selected from nodal longest idle agent, average answer delay and calls queued count.
3. (previously presented) A method of routing a contact in a network comprising a plurality of contact centers, said method comprising the steps of:-
 - (i) receiving a contact at any one of the contact centers, said any one of the contact centers being designated a source contact center with respect to the received contact;
 - (ii) sending a reservation request from the source contact center to each of the contact centers including itself at the same time, said reservation request being for a nodal longest idle agent;
 - (iii) for said reservation request, receiving at the source contact center from each of one or more of the contact centers, a nodal longest idle time and associated agent identifier;

- (iv) routing the received contact to the agent with the longest of all the received nodal longest idle times.
- 4. (previously presented) A method as claimed in claim 3 which further comprises the step of (v) cancelling unused reservations.
- 5. (cancelled)
- 6. (previously presented) A method as claimed in claim 3 wherein said step (iii) of receiving at the source contact center is carried out in a pre-specified time interval.
- 7. (previously presented) A method as claimed in claim 1 or 3 wherein said contact is associated with a specified network skillset and wherein said reservation request is also for agents of that specified skillset.
- 8. (previously presented) A method as claimed in claim 3 which further comprises determining at the source contact center a network longest idle agent.
- 9. (cancelled)
- 10. (previously presented) A contact center suitable for use in a network of contact centers, said contact center comprising:
 - (i) an input arranged to receive a contact;
 - (ii) an output arranged to send a reservation request to each of the contact centers in the network of contact centres including itself at the same time, said reservation request being for an agent with a specified relative intrinsic value;
 - (iii) a second input arranged to receive, for said reservation request, a value of the specified intrinsic and an associated agent identifier from each of one or more of the contact centers;
 - (iv) a processor arranged to route the contact to one of the agents on the basis of the received intrinsic;

wherein said contact center is capable of receiving a reservation request in respect of a different contact from any contact center in said network of contact centers.
- 11. (previously presented) A contact center suitable for use in a network of contact centers, said contact center comprising:

- (i) an input arranged to receive a contact;
- (ii) an output arranged to send a reservation request to each of the contact centers in the network of contact centres including itself at the same time, said reservation request being for a nodal longest idle agent;
- (iii) a second input arranged to receive, for said reservation request, a nodal longest idle time and associated agent identifier from each of one or more of the contact centers;
- (iv) a processor arranged to route the contact to the agent with the longest of all the received nodal longest idle times;

wherein said contact center is capable of receiving a reservation request in respect of a different contact from any contact center in said network of contact centers.

12. (previously presented) A communications network comprising a plurality of contact centers each as claimed in claim 10.

13. (previously presented) A communications network as claimed in claim 12 wherein each of said contact centers comprises a contact center server and a switch.

14. (previously presented) A communications network as claimed in claim 13 said contact center servers being linked to one another by a first part of said communications network and said switches being linked to one another by a second part of said communications network, said first and second parts being substantially isolated from one another.

15. (previously presented) A communications network as claimed in claim 13 wherein each contact center server is connected to its associated switch using a dedicated embedded local area network connection.

Remarks

The Examiner has made the Office Action final despite the fact that the applicant has not previously had sight of the newly cited reference Miloslavsky (US5915012).

The Examiner contends that claims 1 to 4, 6 to 8 and 10 to 15 are anticipated under 35 U.S.C. 102(b) by Miloslavsky. Applicant respectfully disagrees for the following reasons.

Claim 1 of the present invention reads as:

"A method of routing a contact in a network comprising a plurality of contact centers, said method comprising the steps of:-

- a) receiving a contact at any one of the contact centers, said any one of the contact centers being designated a source contact center with respect to the received contact;*
- b) sending a reservation request from the source contact center to each of the contact centers including itself at the same time, said reservation request being for an agent with a specified relative intrinsic value;*
- c) for said reservation request, receiving at the source contact center from each of one or more of the contact centers, a value of the specified intrinsic and an associated agent identifier;*
- d) routing the received contact to one of the agents on the basis of the received intrinsic" (emphasis added).*

It can be seen in the present invention as claimed that any one of the plurality of contact centers can be designated as a source contact center in respect of a contact received at that contact center. Another contact center can be designated as a source contact center for another subsequent contact received at that contact center. Thus, any contact center can be a source contact center for a respective contact received thereby. Each of said plurality of contact centers is arranged in response to being designated as a source contact center for a received contact to send a reservation request from said contact center to all of the contact centers including itself at the same time. Subsequently, upon receiving at the designated source contact center a value of a specified intrinsic and an associated agent

identifier from each of one or more of the contact centers, it (the contact center itself) routes the received contact to one of the contact centers, including possibly itself, on the basis of the received intrinsic. It is an inherent feature of the network of contact centers as claimed that if any one of the contact centers becomes inoperable it does not prevent the remaining contact centers from implementing the foregoing contact sharing scheme between them because there is no single means common to the contact centers responsible for selecting an agent and routing a contact from one contact center to another.

It is quite clear from figure 2 and its corresponding description in Miloslavsky that the multiple call center architecture taught by this reference uses a routing server 192, a statistics server 190 and a database 194 as a network level means common to all of the call centers for selecting an agent and routing a call received at one call center to another (see abstract). This is made particularly clear from the method steps illustrated in figure 4A which discloses that a CTI server associated with a switch that has received a call passes (figure 4A, 266) information to the routing server 192 and passes (figure 4A, 268) call information to the stats server 190. It is the routing server 192 that selects (figure 4A, 274) an agent and which controls (figure 4A, 280, 282 and figure 4B, 286 to 292) the call receiving switch to pass the received call to another switch.

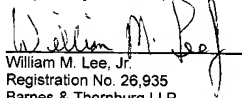
There is no disclosure anywhere in Miloslavsky and particularly not in column 2, lines 30 to 52 or column 6, lines 46 to 56 that teaches or suggests that a contact center upon receiving a contact and being designated as a source contact center for that contact sends a reservation request to all of the contact centers including itself. Nor does Miloslavsky teach or suggest that any of the contact centers upon receiving a reservation request from a source contact center sends a value of a specified intrinsic and an associated agent identifier to the source contact center. It is clear from Miloslavsky that, upon receiving a call at a switch, a CTI server associated with the switch passes information to the routing server and statistics database and it is the routing server that selects an agent and then controls routing of the received contact from the call receiving switch to another switch. The routing server 192, the statistics server 190 and the database 194 are all common to the network of switches (and their associated CTI servers) and, as such, should any one of them

fail, the contact sharing scheme taught by Miloslavsky also fails. Therefore, it can be concluded that Miloslavsky does not teach all of the limitations of claim 1, not does the disclosure of this reference render claim 1 as obvious since Miloslavsky teaches a network level means common to all of the switches for sharing received calls between the switches (call centers). There is nothing in Miloslavsky that would lead one skilled in the art to the arrangement of contact centers as claimed which do not require a common network level means such as a routing server to effect sharing of received contacts. Furthermore, the arrangement as claimed provides a useful contribution to the art because it is much more fault tolerant than the system taught by Miloslavsky.

In view of the foregoing, favorable reconsideration of the application is respectfully requested.

May 17, 2007

Respectfully submitted,


William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg LLP
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)